AMENDMENTS TO THE CLAIMS

Claims 9 and 17 are amended. No claim is canceled, and no claim is added.

1. (Previously Amended) A system comprising:

at least one thread;

a pool of locks;

at least one object that is capable of representing a resource needed by the at least one thread, the at least one object having a variable; and,

a recyclable locking mechanism for associating a lock from the pool of locks with the at least one object using the variable as a pointer when requested by the at least one thread, the lock returning to the pool of locks without having to destroy the at least one object when the at least one thread no longer needs to access the resource.

2. (Original) The system of Claim 1, wherein the recyclable locking mechanism further is to deassociate the lock from the object upon a second request by the thread.

3. (Previously Amended) The system of Claim 1, wherein the variable of each of the at least one object comprises an integer.

4. (Previously Amended) The system of Claim 1, wherein the variable of each of the at least one object comprises a set of high bits defining the pointer to a lock and a set of low bits defining a status variable.

5. (Original) The system of Claim 4, wherein the set of high bits comprises 27 bits and the set of low bits comprises 5 bits.

6. (Original) The system of Claim 4, wherein the set of low bits is initially set to -1.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue, Suite 2800
Seattle, Washington 98101
206.682.8100

7. (Original) The system of Claim 4, wherein upon the first request the set of low bits is incremented by 1.

8. (Previously Amended) The system of Claim 7, wherein upon the set of low bits after incrementation by one being greater than 0, the variable has an in-use status by a thread such that the set of high bits points to a lock.

9. (Currently Amended) The system of Claim 7, wherein upon the variable after incrementation by one being less than 32, the ~~associated~~ variable has a spin status such that the set of high bits is currently in the process of being set to a lock.

10. (Original) The system of Claim 4, wherein the recyclable locking mechanism further is to deassociate the lock from the object upon a second request by the thread,

such that upon the second request the set of low bits is decremented by 1.

11. (Previously Amended) A method comprising:

asserting an instruction by a thread to lock an object;

increasing a variable of the object, the variable having a set of high bits for representing a pointer to a lock and a set of low bits for representing a lock status;

determining whether the variable is greater than a boundary value so as to allocate the lock; and

recycling the lock by returning the lock to a pool of locks when the thread no longer needs the object regardless of whether the object persists after the lock returns to the pool of locks.

12. (Previously Amended) The method of Claim 11, further comprising initially setting the variable of the object to -1.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue, Suite 2800
Seattle, Washington 98101
206.682.8100

13. (Previously Amended) The method of Claim 11, further comprising upon determining that the variable is less than the boundary value, waiting until the variable is greater than the boundary value.

14. (Previously Amended) The method of Claim 11, further comprising upon determining that the variable is greater than the boundary value, using the set of high bits of the variable as a pointer to a lock for the object.

15. (Previously Amended) The method of Claim 14, further comprising:

decrementing the variable of the object; and, determining whether the variable is less than a minimum threshold.

16. (Previously Amended) The method of Claim 15, upon determining that the variable is less than the minimum threshold, recycling the lock.

17. (Currently Amended) A computer comprising:

a processor;

a computer-readable medium; and,

a recyclable locking mechanism program executed by the processor from the computer-readable medium to associate a lock with an object using a variable of the object as a pointer when requested by a thread, the lock being capable of returning to a pool of locks without having to destroy the object when the object is no longer needed by the thread.

18. (Previously Amended) The computer of Claim 17, wherein the variable of the object comprises a set of high bits defining the pointer to a lock and a set of low bits defining a status variable.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue, Suite 2800
Seattle, Washington 98101
206.682.8100

19. (Previously Amended) A computer-readable medium having a recyclable locking mechanism program stored thereon for execution on a computer to associate a lock with an object using a variable of the object as a pointer when requested by a thread, the lock being capable of returning to a pool of locks without having to destroy the object when the object is no longer needed by the thread.

20. (Previously Amended) The computer-readable medium of Claim 19, wherein the variable of the object comprises a set of high bits defining the pointer to a lock and a set of low bits defining a status variable.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue, Suite 2800
Seattle, Washington 98101
206.682.8100